OIPE JC67 SEP 05 2001 PATENT & TRADEMARK

RECEIVED
SEP 07 2001
TECH CENTER 1600/2900

SEQUENCE LISTING

<110> USHIO, Shimpei
TORIGOE, Kakuji
TANIMOTO, Tadao
OKAMURA, Haruki
KURIMOTO, Masashi
FUKUDA, Shigeharu
KUNIKATA, Toshio
TANIGUCHI, Mutsuko
KOHNO, Keizo

<120> INTERFERON-Y INDUCING POLYPEPTIDE, PHARMACEUTICAL COMPOSITION THEREO F, MONOCLONAL ANTIBODY THERETO, AND METHODS OF USE

<130> USHIO=2

<140> 09/716,356
<141> 2000-11-21

<150> 08/832,198
<151> 1997-04-08

<150> 08/721,018
<151> 1996-09-26

<150> 08/558,191
<151> 1995-11-15

<150> 08/832,180
<151> 1997-04-08

a, <150> 08/558,818
<151> 1995-11-15

<150> 08/832,177
<151> 1997-04-08

<150> 08/599,879
<151> 1996-02-14

<150> 08/974,469
<151> 1996-02-14

<160> 22

<170> PatentIn version 3.1

<210> 1
<211> 25
<212> PRT
<213> Mus sp.

<400> 1

Ile Ile Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile
1 5 10 15

Gln Ser Asp Leu Ile Phe Phe Gln Lys
20 25

<210> 2
<211> 18
<212> PRT
<213> Mus sp.

<400> 2

```
Gln Pro Val Phe Glu Asp Met Thr Asp Ile Asp Gln Ser Ala Ser Glu
1               5                  10                  15

Pro Gln
```

<210> 3
<211> 471
<212> DNA
<213> Mus sp.

<220>
<221> CDS
<222> (1)..(471)
<223> Xaa is methionine or threonine

<400> 3

```
aac ttt ggc cga ctt cac tgt aca acc gca gta ata cgg aat ata aat      48
Asn Phe Gly Arg Leu His Cys Thr Thr Ala Val Ile Arg Asn Ile Asn
1               5                  10                  15

gac caa gtt ctc ttc gtt gac aaa aga cag cct gtg ttc gag gat atg      96
Asp Gln Val Leu Phe Val Asp Lys Arg Gln Pro Val Phe Glu Asp Met
            20                  25                  30

act gat att gat caa agt gcc agt gaa ccc cag acc aga ctg ata ata     144
Thr Asp Ile Asp Gln Ser Ala Ser Glu Pro Gln Thr Arg Leu Ile Ile
        35                  40                  45

tac atg tac aaa gac agt gaa gta aga gga ctg gct gtg acc ctc tct     192
Tyr Met Tyr Lys Asp Ser Glu Val Arg Gly Leu Ala Val Thr Leu Ser
    50                  55                  60

gtg aag gat agt aaa ayg tct acc ctc tcc tgt aag aac aag atc att     240
Val Lys Asp Ser Lys Xaa Ser Thr Leu Ser Cys Lys Asn Lys Ile Ile
65                  70                  75                  80

tcc ttt gag gaa atg gat cca cct gaa aat att gat gat ata caa agt     288
Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile Gln Ser
                85                  90                  95

gat ctc ata ttc ttt cag aaa cgt gtt cca gga cac aac aag atg gag     336
Asp Leu Ile Phe Phe Gln Lys Arg Val Pro Gly His Asn Lys Met Glu
            100                 105                 110

ttt gaa tct tca ctg tat gaa gga cac ttt ctt gct tgc caa aag gaa     384
Phe Glu Ser Ser Leu Tyr Glu Gly His Phe Leu Ala Cys Gln Lys Glu
        115                 120                 125

gat gat gct ttc aaa ctc att ctg aaa aaa aag gat gaa aat ggg gat     432
Asp Asp Ala Phe Lys Leu Ile Leu Lys Lys Lys Asp Glu Asn Gly Asp
    130                 135                 140
```

```
aaa tct gta atg ttc act ctc act aac tta cat caa agt                    471
Lys Ser Val Met Phe Thr Leu Thr Asn Leu His Gln Ser
145                 150                 155


<210>  4
<211>  157
<212>  PRT
<213>  Mus sp.

<220>
<221>  misc_feature
<222>  (70)..(70)
<223>  The 'Xaa' at location 70 stands for Thr, or Met.

<400>  4

Asn Phe Gly Arg Leu His Cys Thr Thr Ala Val Ile Arg Asn Ile Asn
1               5                   10                  15


Asp Gln Val Leu Phe Val Asp Lys Arg Gln Pro Val Phe Glu Asp Met
            20                  25                  30


Thr Asp Ile Asp Gln Ser Ala Ser Glu Pro Gln Thr Arg Leu Ile Ile
        35                  40                  45


Tyr Met Tyr Lys Asp Ser Glu Val Arg Gly Leu Ala Val Thr Leu Ser
    50                  55                  60


Val Lys Asp Ser Lys Xaa Ser Thr Leu Ser Cys Lys Asn Lys Ile Ile
65                  70                  75                  80


Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile Gln Ser
                85                  90                  95


Asp Leu Ile Phe Phe Gln Lys Arg Val Pro Gly His Asn Lys Met Glu
            100                 105                 110


Phe Glu Ser Ser Leu Tyr Glu Gly His Phe Leu Ala Cys Gln Lys Glu
        115                 120                 125


Asp Asp Ala Phe Lys Leu Ile Leu Lys Lys Lys Asp Glu Asn Gly Asp
    130                 135                 140


Lys Ser Val Met Phe Thr Leu Thr Asn Leu His Gln Ser
145                 150                 155


<210>  5
<211>  471
<212>  DNA
<213>  Homo sapiens

<220>
```

<221> CDS
<222> (1)..(471)
<223> Xaa is isoleucine or threonine

<400> 5

```
tac ttt ggc aag ctt gaa tct aaa tta tca gtc ata aga aat ttg aat       48
Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
1               5                   10                  15

gac caa gtt ctc ttc att gac caa gga aat cgg cct cta ttt gaa gat       96
Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
            20                  25                  30

atg act gat tct gac tgt aga gat aat gca ccc cgg acc ata ttt att      144
Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
        35                  40                  45

ata agt atg tat aaa gat agc cag cct aga ggt atg gct gta act atc      192
Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
    50                  55                  60

tct gtg aag tgt gag aaa att tca ayt ctc tcc tgt gag aac aaa att      240
Ser Val Lys Cys Glu Lys Ile Ser Xaa Leu Ser Cys Glu Asn Lys Ile
65                  70                  75                  80

att tcc ttt aag gaa atg aat cct cct gat aac atc aag gat aca aaa      288
Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
                85                  90                  95

agt gac atc ata ttc ttt cag aga agt gtc cca gga cat gat aat aag      336
Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
            100                 105                 110

atg caa ttt gaa tct tca tca tac gaa gga tac ttt cta gct tgt gaa      384
Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
        115                 120                 125

aaa gag aga gac ctt ttt aaa ctc att ttg aaa aaa gag gat gaa ttg      432
Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
    130                 135                 140

ggg gat aga tct ata atg ttc act gtt caa aac gaa gac                 471
Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
145                 150                 155
```

<210> 6
<211> 157
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<222> (73)..(73)
<223> The 'Xaa' at location 73 stands for Thr, or Ile.

<400> 6

```
Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
1               5                   10                  15
```

```
Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
            20                  25                  30

Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
        35                  40                  45

Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
    50                  55                  60

Ser Val Lys Cys Glu Lys Ile Ser Xaa Leu Ser Cys Glu Asn Lys Ile
65                  70                  75                  80

Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
                85                  90                  95

Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
            100                 105                 110

Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
        115                 120                 125

Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
    130                 135                 140

Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
145                 150                 155
```

<210> 7
<211> 1120
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (178)..(756)
<223> Xaa is isoleucine or threonine

<400> 7

```
gcctggacag tcagcaagga attgtctccc agtgcatttt gccctcctgg ctgccaactc     60

tggctgctaa agcggctgcc acctgctgca gtctacacag cttcgggaag aggaaaggaa    120

cctcagacct tccagatcgc ttcctctcgc aacaaactat ttgtcgcagg aataaag       177

atg gct gct gaa cca gta gaa gac aat tgc atc aac ttt gtg gca atg       225
Met Ala Ala Glu Pro Val Glu Asp Asn Cys Ile Asn Phe Val Ala Met
1               5                   10                  15

aaa ttt att gac aat acg ctt tac ttt ata gct gaa gat gat gaa aac      273
Lys Phe Ile Asp Asn Thr Leu Tyr Phe Ile Ala Glu Asp Asp Glu Asn
            20                  25                  30

ctg gaa tca gat tac ttt ggc aag ctt gaa tct aaa tta tca gtc ata      321
```

```
Leu Glu Ser Asp Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile
        35                  40                  45

aga aat ttg aat gac caa gtt ctc ttc att gac caa gga aat cgg cct      369
Arg Asn Leu Asn Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro
    50                  55                  60

cta ttt gaa gat atg act gat tct gac tgt aga gat aat gca ccc cgg      417
Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg
65                  70                  75                  80

acc ata ttt att ata agt atg tat aaa gat agc cag cct aga ggt atg      465
Thr Ile Phe Ile Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met
                85                  90                  95

gct gta act atc tct gtg aag tgt gag aaa att tca ayt ctc tcc tgt      513
Ala Val Thr Ile Ser Val Lys Cys Glu Lys Ile Ser Xaa Leu Ser Cys
            100                 105                 110

gag aac aaa att att tcc ttt aag gaa atg aat cct cct gat aac atc      561
Glu Asn Lys Ile Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile
        115                 120                 125

aag gat aca aaa agt gac atc ata ttc ttt cag aga agt gtc cca gga      609
Lys Asp Thr Lys Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly
    130                 135                 140

cat gat aat aag atg caa ttt gaa tct tca tca tac gaa gga tac ttt      657
His Asp Asn Lys Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe
145                 150                 155                 160

cta gct tgt gaa aaa gag aga gac ctt ttt aaa ctc att ttg aaa aaa      705
Leu Ala Cys Glu Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys
                165                 170                 175

gag gat gaa ttg ggg gat aga tct ata atg ttc act gtt caa aac gaa      753
Glu Asp Glu Leu Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu
            180                 185                 190

gac tagctattaa aatttcatgc cgggcgcagt ggctcacgcc tgtaatccca           806
Asp

gccctttggg aggctgaggc gggcagatca ccagaggtca ggtgttcaag accagcctga   866

ccaacatggt gaaacctcat ctctactaaa aatactaaaa attagctgag tgtagtgacg   926

catgccctca atcccagcta ctcaagaggc tgaggcagga gaatcacttg cactccggag   986

gtagaggttg tggtgagccg agattgcacc attgcgctct agcctgggca acaacagcaa  1046

aactccatct caaaaaataa aataaataaa taaacaaata aaaaattcat aatgtgaaaa  1106

aaaaaaaaaa aaaa                                                    1120

<210>  8
<211>  193
<212>  PRT
<213>  Homo sapiens

<220>
<221>  misc_feature
```

<222> (109)..(109)
<223> The 'Xaa' at location 109 stands for Thr, or Ile.

<400> 8

```
Met Ala Ala Glu Pro Val Glu Asp Asn Cys Ile Asn Phe Val Ala Met
1               5                  10                  15

Lys Phe Ile Asp Asn Thr Leu Tyr Phe Ile Ala Glu Asp Asp Glu Asn
            20                  25                  30

Leu Glu Ser Asp Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile
        35                  40                  45

Arg Asn Leu Asn Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro
    50                  55                  60

Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg
65                  70                  75                  80

Thr Ile Phe Ile Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met
                85                  90                  95

Ala Val Thr Ile Ser Val Lys Cys Glu Lys Ile Ser Xaa Leu Ser Cys
            100                 105                 110

Glu Asn Lys Ile Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile
        115                 120                 125

Lys Asp Thr Lys Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly
    130                 135                 140

His Asp Asn Lys Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe
145                 150                 155                 160

Leu Ala Cys Glu Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys
                165                 170                 175

Glu Asp Glu Leu Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu
            180                 185                 190

Asp
```

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, t, or g.

<400> 9
atrtcrtcda trttytcngg 20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, t, or g.

<400> 10
ttygargaya tgacngayat 20

<210> 11
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 11
ttygargara tggaycc 17

<210> 12
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 12
cgagggatcc tactttggca agcttg 26

<210> 13
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 13

caaggaattc ctagtcttcg gttttg 26

<210> 14
<211> 10
<212> PRT
<213> Homo sapiens

<400> 14

Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser
1 5 10

<210> 15
<211> 10
<212> PRT
<213> Homo sapiens

<400> 15

Ser Ile Met Phe Thr Val Gln Asn Glu Asp
1 5 10

<210> 16
<211> 14
<212> PRT
<213> Homo sapiens

<400> 16

Thr Ile Phe Ile Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg
1 5 10

<210> 17
<211> 17
<212> PRT
<213> Homo sapiens

<400> 17

Ile Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr
1 5 10 15

Lys

<210> 18
<211> 50
<212> PRT
<213> Homo sapiens

<400> 18

Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
1 5 10 15

Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp

20 25 30

Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
35 40 45

Ile Ser
50

<210> 19
<211> 13
<212> PRT
<213> Homo sapiens

<400> 19

Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg
1 5 10

<210> 20
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 20

Met Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser
1 5 10

<210> 21
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 21
atagaattca aatgtacttt ggcaagcttg aatc 34

<210> 22
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 22
ataaagcttc tagtcttcgt tttgaac 27